

2/23

FIRST EMBODIMENT

FIG.2

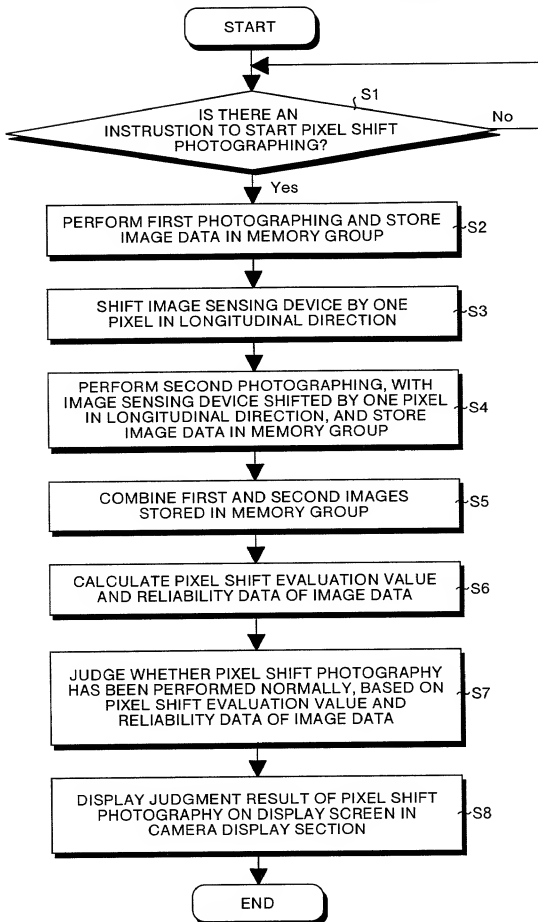


FIG.3

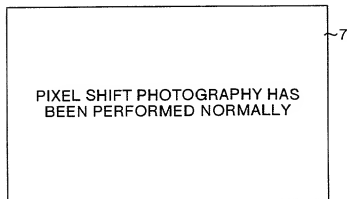


FIG.4

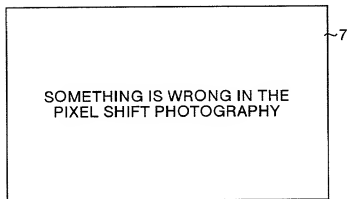


FIG. 3

FIG.5A

PHOTOGRAPHED IMAGE 1
(NO SHIFT)

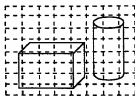


FIG.5B

PHOTOGRAPHED IMAGE 2
(AFTER SHIFT)

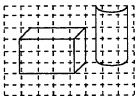


FIG.5C

TARGET IMAGE
(SHIFT PHOTOGRAPHED
IMAGE 1 TO $\uparrow 1 \rightarrow 0$)

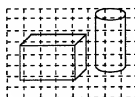


FIG.6A

PHOTOGRAPHED
IMAGE 1

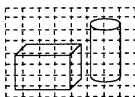
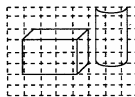


FIG.6B

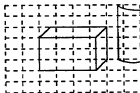
PHOTOGRAPHED
IMAGE 2



5/23

FIG.7A

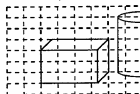
SHIFT PHOTOGRAPHED IMAGE
2 TO $\uparrow 0 \rightarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.45

FIG.7B

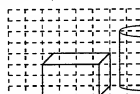
SHIFT PHOTOGRAPHED IMAGE
2 TO $\downarrow 1 \rightarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.7

FIG.7C

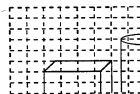
SHIFT PHOTOGRAPHED IMAGE
2 TO $\downarrow 2 \rightarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.65

FIG.7D

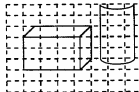
SHIFT PHOTOGRAPHED IMAGE
2 TO $\downarrow 3 \rightarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.4

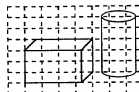
6/23

FIG.8A SHIFT PHOTOGRAPHED IMAGE
 2 TO $\uparrow 0 \rightarrow 0$, CORRELATION



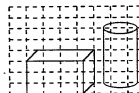
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.7

FIG.8B SHIFT PHOTOGRAPHED IMAGE
 2 TO $\downarrow 1 \rightarrow 0$, CORRELATION



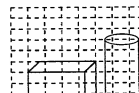
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.95

FIG.8C SHIFT PHOTOGRAPHED IMAGE
 2 TO $\downarrow 2 \rightarrow 0$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.9

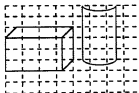
FIG.8D SHIFT PHOTOGRAPHED IMAGE
 2 TO $\downarrow 3 \rightarrow 0$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.65

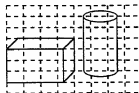
7/23

FIG.9A SHIFT PHOTOGRAPHED IMAGE
 2 TO $\uparrow 0 \leftarrow 1$, CORRELATION



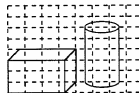
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.6

FIG.9B SHIFT PHOTOGRAPHED IMAGE
 2 TO $\uparrow 1 \leftarrow 1$, CORRELATION



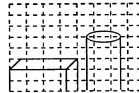
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.85

FIG.9C SHIFT PHOTOGRAPHED IMAGE
 2 TO $\downarrow 2 \leftarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.8

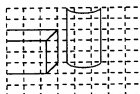
FIG.9D SHIFT PHOTOGRAPHED IMAGE
 2 TO $\downarrow 3 \leftarrow 1$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.55

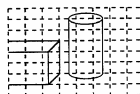
8/23

FIG.10A SHIFT PHOTOGRAPHED IMAGE
2 TO $\uparrow 0 \leftarrow 2$, CORRELATION



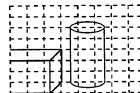
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.3

FIG.10B SHIFT PHOTOGRAPHED IMAGE
2 TO $\uparrow 1 \leftarrow 2$, CORRELATION



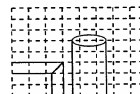
COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.6

FIG.10C SHIFT PHOTOGRAPHED IMAGE
2 TO $\uparrow 2 \leftarrow 2$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.55

FIG.10D SHIFT PHOTOGRAPHED IMAGE
2 TO $\uparrow 3 \leftarrow 2$, CORRELATION



COEFFICIENT (WITH RESPECT TO IMAGE 1) 0.25

9/23

FIG.11

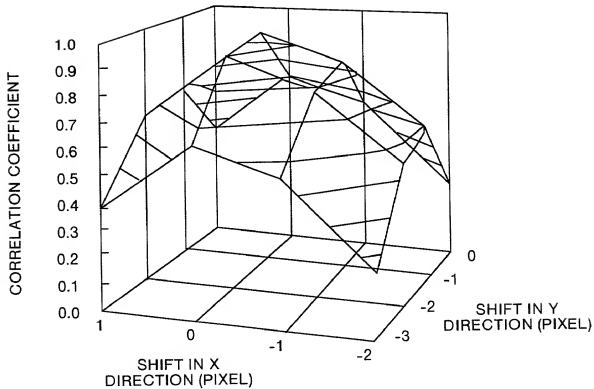
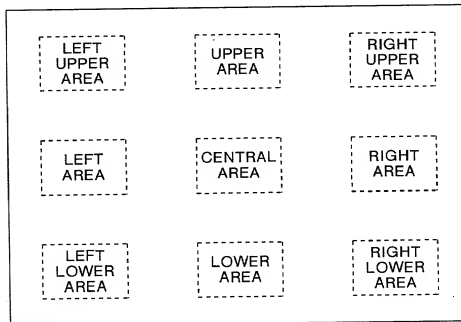


FIG.12

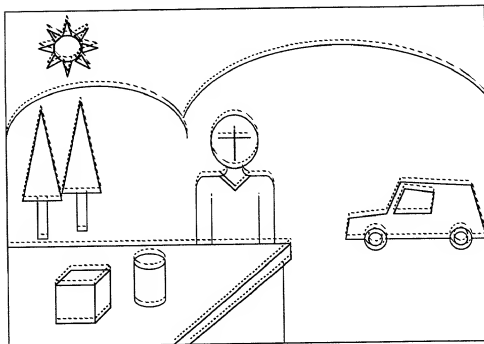
AMOUNT OF SHIFT IN EACH POSITION (EXAMPLE)



10/23

FIG.13A

PIXEL SHIFT (NORMAL STATE)



— : BEFORE PIXEL SHIFT
 - - - : AFTER PIXEL SHIFT

FIG.13B

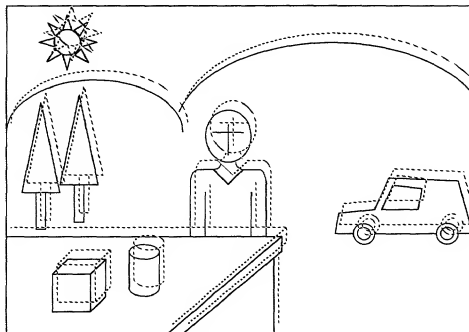
AMOUNT OF SHIFT IN EACH POSITION (EXAMPLE)

| | | |
|----------------------------|-------------------------|-----------------------------|
| LEFT UPPER AREA | UPPER AREA | RIGHT UPPER AREA |
| LEFT AREA | CENTRAL AREA | RIGHT AREA |
| LEFT LOWER AREA | LOWER AREA | RIGHT LOWER AREA |

11/23

FIG.14A

PIXEL SHIFT (WHEN THERE IS A HAND MOVEMENT
 OR WHEN THERE IS A FAILURE IN THE MECHANISM)



— : BEFORE PIXEL SHIFT

- - - : AFTER PIXEL SHIFT

FIG.14B

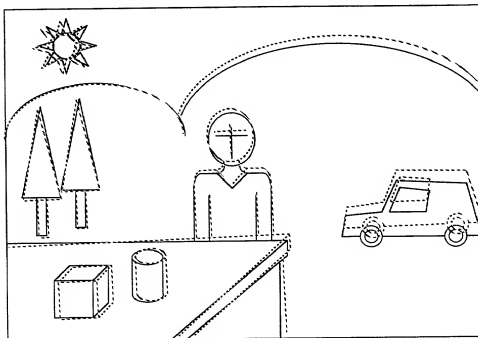
AMOUNT OF SHIFT IN EACH POSITION (EXAMPLE)

| | | |
|------------------------|---------------------|-------------------------|
| <p>LEFT UPPER AREA</p> | <p>UPPER AREA</p> | <p>RIGHT UPPER AREA</p> |
| <p>LEFT AREA</p> | <p>CENTRAL AREA</p> | <p>RIGHT AREA</p> |
| <p>LEFT LOWER AREA</p> | <p>LOWER AREA</p> | <p>RIGHT LOWER AREA</p> |

12/23

FIG.15A

PIXEL SHIFT (WHEN THERE IS A HAND MOVEMENT
OR WHEN THERE IS A FAILURE IN THE MECHANISM)



— : BEFORE PIXEL SHIFT
- - - : AFTER PIXEL SHIFT

FIG.15B

AMOUNT OF SHIFT IN EACH POSITION (EXAMPLE)

| LEFT UPPER AREA | UPPER AREA | RIGHT UPPER AREA |
|-----------------|--------------|------------------|
| | | |
| LEFT AREA | CENTRAL AREA | RIGHT AREA |
| | | |
| LEFT LOWER AREA | LOWER AREA | RIGHT LOWER AREA |
| | | |

13/23

FIG.16A

PIXEL SHIFT (MOVING OBJECT EXIST)

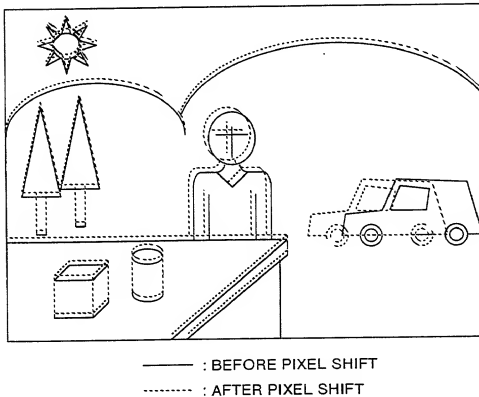
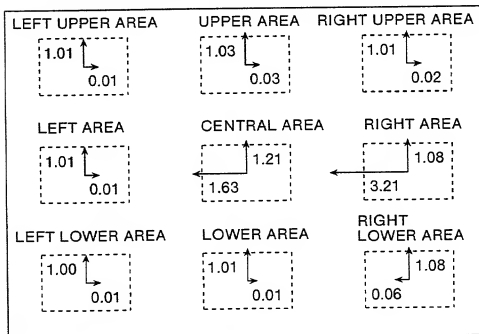


FIG.16B

AMOUNT OF SHIFT IN EACH POSITION (EXAMPLE)



14/23

FIG.17

SECOND EMBODIMENT

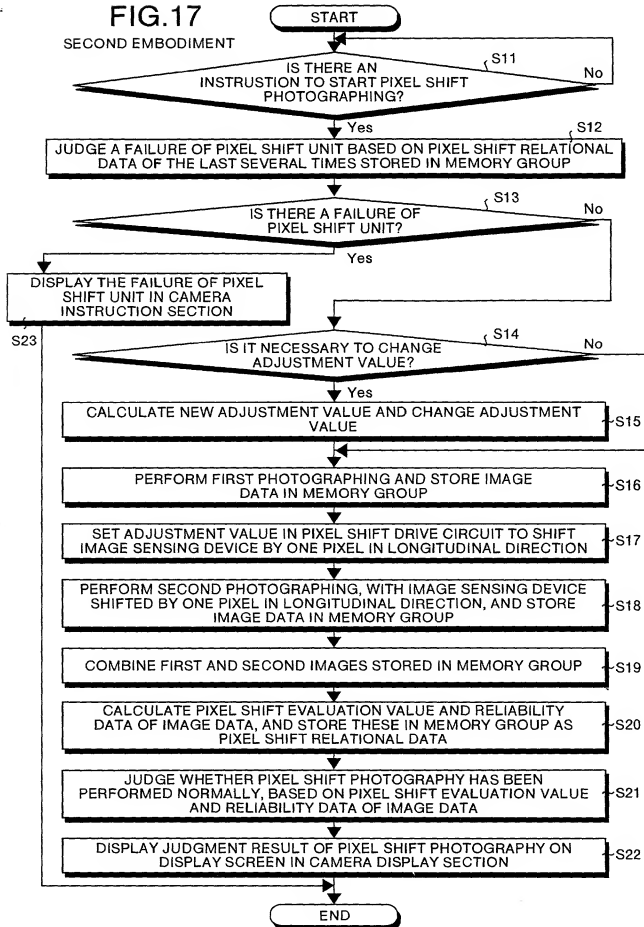
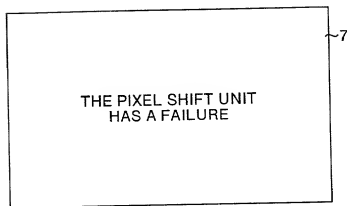


FIG.18



16/23

FIG.19

THIRD EMBODIMENT

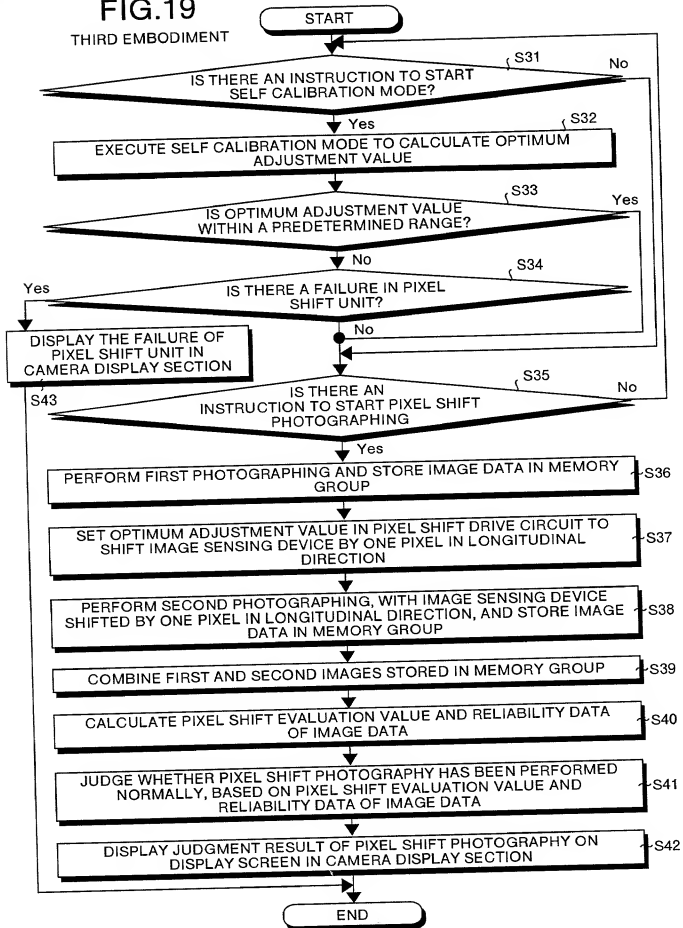


FIG.20A

PHOTOGRAPHED IMAGE 1
(NO SHIFT)

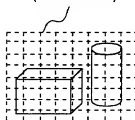


FIG.20B

TARGET IMAGE
(IMAGE 1 $\downarrow 1 \rightarrow 0$)

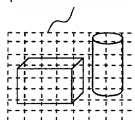
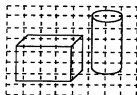


FIG.21A

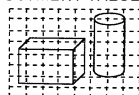
PHOTOGRAPHED IMAGE 2,
 (ADJUSTMENT VALUE = 80)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.75

FIG.21B

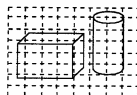
PHOTOGRAPHED IMAGE 3,
 (ADJUSTMENT VALUE = 90)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.85

FIG.21C

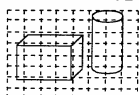
PHOTOGRAPHED IMAGE 4,
 (ADJUSTMENT VALUE = 100)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.95

FIG.21D

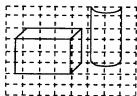
PHOTOGRAPHED IMAGE 5,
 (ADJUSTMENT VALUE = 110)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.93

FIG.21E

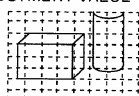
PHOTOGRAPHED IMAGE 6,
 (ADJUSTMENT VALUE = 120)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.83

FIG.21F

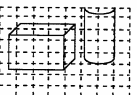
PHOTOGRAPHED IMAGE 7,
 (ADJUSTMENT VALUE = 130)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.73

FIG.21G

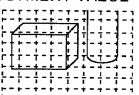
PHOTOGRAPHED IMAGE 8,
 (ADJUSTMENT VALUE = 140)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.63

FIG.21H

PHOTOGRAPHED IMAGE 9,
 (ADJUSTMENT VALUE = 150)



COINCIDENCE DEGREE WITH
 RESPECT TO TARGET IMAGE = 0.53

19/23

FIG.22

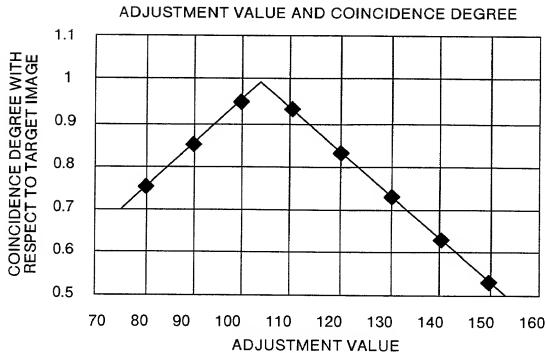
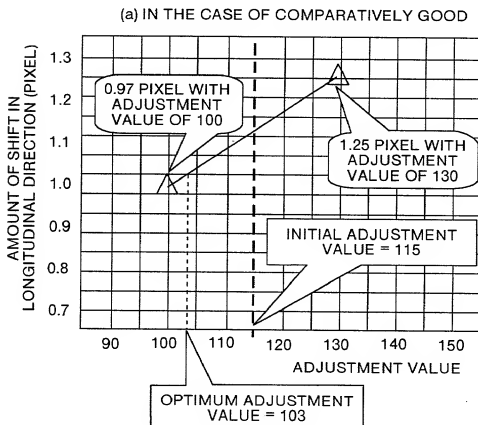


FIG.23



20/23

FIG.24

(b) IN THE CASE OF ADJUSTMENT VALUE IS DEVIATED LARGELY

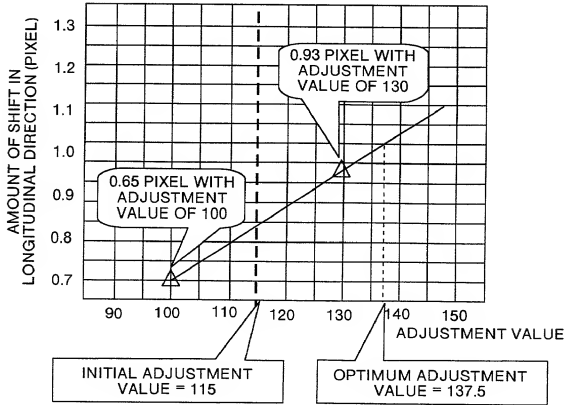
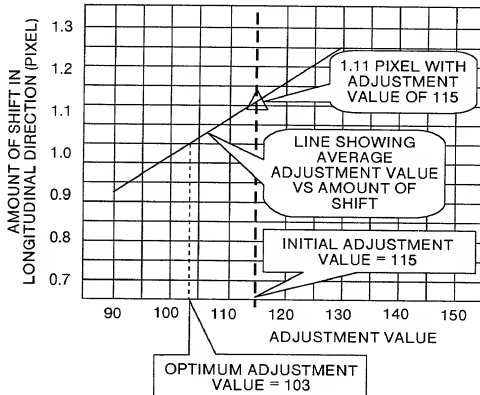


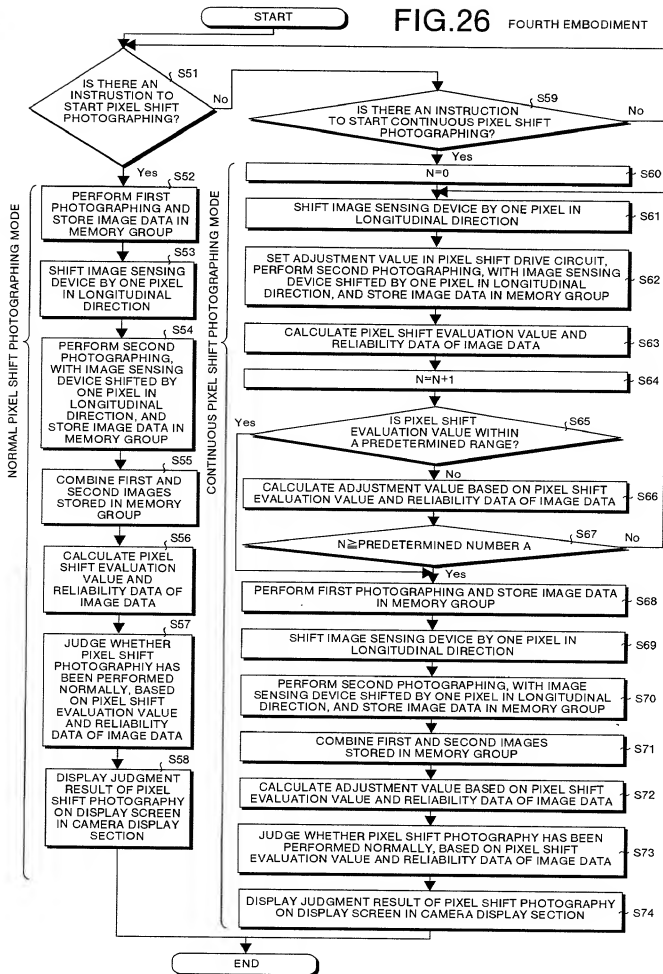
FIG.25

(2) IN THE CASE OF ADJUSTMENT VALUE AT ONE POINT



21/23

FIG.26 FOURTH EMBODIMENT



22/23

FIG.27A

CCD SHIFT METHOD

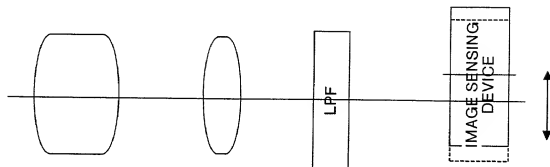


FIG.27B

LPF GRADIENT METHOD

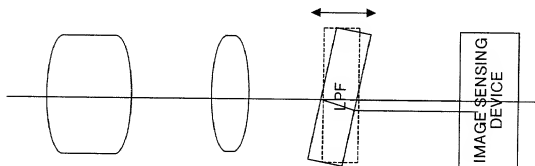


FIG.27C

LENS SHIFT METHOD

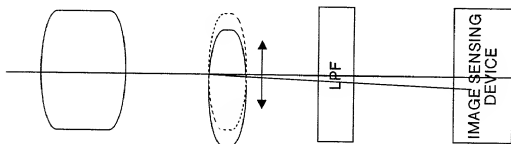


FIG. 28A

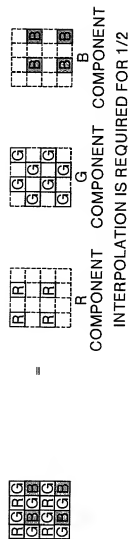


FIG. 28B

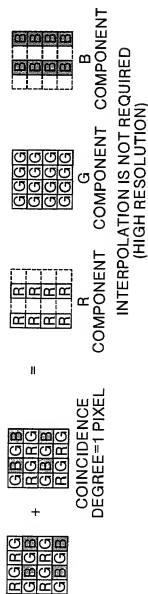


FIG. 28C

